

Claims

1. In a communication system, a method for determining a data rate for reverse link communication from a mobile station to a base station comprising:
 - determining packets of data for transmission from the mobile station for a number of communication services;
 - determining a transmission deadline of each of said packets of data;
 - arranging the packets of data in a queue for transmission in accordance with said determined transmission deadline;
 - determining a data rate for transmission of the packets of data based on the arrangement of said packets of data in said queue allowing for meeting the transmission deadline for each of said packets of data.
2. The method as recited in claim 1 further comprising:
 - communicating said data rate from said mobile station to said base station.
3. The method as recited in claim 1 further comprising:
 - determining duration for use of said determined data rate for transmissions of the packets of data based on the arrangement of said packets of data in said queue.
4. The method as recited in claim 3 further comprising:
 - communicating said determined duration from said mobile station to said base station.

5. The method as recited in claim 1 further comprising:
determining whether available resources allows for allocation at said base station for transmission from said mobile station at said data rate.
6. The method as recited in claim 5 further comprising:
indicating a congestion level alert to said mobile station when said determining available resources disallow for allocation at said base station for transmission from said mobile station at said data rate.
7. The method as recited in claim 6 further comprising:
dropping at least a packet of data of said packets of data in said queue to determine a new queue of packets of data;
determining a new data rate for transmission of said new queue of packets of data, wherein said new data rate is lower than said data rate.
8. The method as recited in claim 7 further comprising:
determining a new duration for use of said determined new data rate for transmissions of the packets of data based on the arrangement of said packets of data in said new queue.
9. In a communication system, a method for determining a data rate for reverse link communication from a mobile station to a base station comprising:
determining packets of data for transmission from the mobile station for a number of communication services;

determining a transmission deadline of each of said packets of data;
arranging the packets of data in a number of queue arrangements for
transmission in accordance with said determined transmission deadline;
determining a number of data rates for transmission of the packets of
data based on the number of possible queue arrangements.

10. The method as recited in claim 9 wherein said number of determined data rates include a required data rate, and at least one congestion level data rate.

11. The method as recited in claim 9 further comprising:
communicating said number of data rates from said mobile station to
said base station.

12. The method as recited in claim 9 further comprising:
determining duration for use of each of said determined number of
data rates for transmissions of the packets of data based on the arrangement of
said packets of data in said queue.

13. The method as recited in claim 12 further comprising:
communicating said determined duration from said mobile station to
said base station.

14. The method as recited in claim 9 further comprising:

determining whether available resources allows for allocation at said base station for transmission from said mobile station at least one of said number of data rates.

15. The method as recited in claim 14 further comprising:

indicating to said mobile station when said determining available resources allows for allocation at said base station for transmission from said mobile station at least at one of said data rates.

16. In a communication system, an apparatus for determining a data rate for reverse link communication from a mobile station to a base station comprising:

means for determining packets of data for transmission from the mobile station for a number of communication services;

means for determining a transmission deadline of each of said packets of data;

means for arranging the packets of data in a queue for transmission in accordance with said determined transmission deadline;

means for determining a data rate for transmission of the packets of data based on the arrangement of said packets of data in said queue allowing for meeting the transmission deadline for each of said packets of data.

17. The apparatus as recited in claim 16 further comprising:
means for communicating said data rate from said mobile station to said base station.
18. The apparatus as recited in claim 16 further comprising:
means for determining duration for use of said determined data rate for transmissions of the packets of data based on the arrangement of said packets of data in said queue.
19. The apparatus as recited in claim 18 further comprising:
means for communicating said determined duration from said mobile station to said base station.
20. The apparatus as recited in claim 16 further comprising:
means for determining whether available resources allows for allocation at said base station for transmission from said mobile station at said data rate.
21. The apparatus as recited in claim 20 further comprising:
means for indicating a congestion level alert to said mobile station when said determining available resources disallow for allocation at said base station for transmission from said mobile station at said data rate.

22. The apparatus as recited in claim 21 further comprising:

means for dropping at least a packet of data of said packets of data in said queue to determine a new queue of packets of data;

means for determining a new data rate for transmission of said new queue of packets of data, wherein said new data rate is lower than said data rate.

23. The apparatus as recited in claim 22 further comprising:

means for determining a new duration for use of said determined new data rate for transmissions of the packets of data based on the arrangement of said packets of data in said new queue.

24. In a communication system, an apparatus for determining a data rate for reverse link communication from a mobile station to a base station comprising:

means for determining packets of data for transmission from the mobile station for a number of communication services;

means for determining a transmission deadline of each of said packets of data;

means for arranging the packets of data in a number of queue arrangements for transmission in accordance with said determined transmission deadline;

means for determining a number of data rates for transmission of the packets of data based on the number of possible queue arrangements.

25. The apparatus as recited in claim 24 wherein said number of determined data rates include a required data rate, and at least one congestion level data rate.

26. The apparatus as recited in claim 24 further comprising:
means for communicating said number of data rates from said mobile station to said base station.

27. The apparatus as recited in claim 24 further comprising:
means for determining duration for use of each of said determined number of data rates for transmissions of the packets of data based on the arrangement of said packets of data in said queue.

28. The apparatus as recited in claim 27 further comprising:
means for communicating said determined duration from said mobile station to said base station.

29. The apparatus as recited in claim 9 further comprising:
means for determining whether available resources allows for allocation at said base station for transmission from said mobile station at least one of said number of data rates.

30. The apparatus as recited in claim 29 further comprising:
- means for indicating to said mobile station when said determining available resources allows for allocation at said base station for transmission from said mobile station at least at one of said data rates.